

DETAILED ACTION

1. This Office Action is in response to the Request for Continued Examination filed 3/23/10. An IDS has been received with the RCE. It is noted that no claim amendments and no remarks have been received with the filing of the RCE, thus the rejections applied to the claims in the Final Rejection mailed 2/25/10 have been maintained. Also, in order to further prosecution, additional new grounds or rejection of the independent claims 1, 3, 5, 7, 12, 19, 23, 34, 39, and 47 have been made over Gagnon et al. in view Auld, Jr. et al., as shown below. Claims 1-51 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-16, 18-20, 22-27, 29-36, 39-44, and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. (European Patent Application EP 1 024 661 A2) in view of Wugofski (U.S. Patent 6,990,680 B1).

With respect to claim 1, Gagnon et al. discloses a wireless communication system supporting a broadcast service **(See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting)**. Gagnon et al. also discloses transmitting a broadcast session on a broadcast transmission channel **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104)**. Gagnon et al. further discloses transmitting broadcast overhead information for the broadcast session with the broadcast session **(See page 8 paragraph 36 of Gagnon et al. for reference to including session description protocol plus (SDP+) records, which provide information about the broadcast sessions, in the broadcast sessions)**. Gagnon et al. also discloses that the broadcast overhead information provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106)**. Gagnon et al. further discloses the broadcast overhead information including physical channel

parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the broadcast overhead information being transmitted in-band with the broadcast session.

With respect to claim 3, Gagnon et al. discloses a communication signal transmitted on a carrier wave (See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to a communication signal transmitted on a carrier wave from a transmission station 102 to a satellite/relay 104 and for reference to the signal being further transmitted from the satellite/relay 104 to a receiver station 106 on another carrier wave). Gagnon et al. also discloses transmitting a broadcast session portion (See page 7 paragraph 31 of Gagnon et al. for reference to the signal including a broadcast session). Gagnon et al. further discloses transmitting a session description protocol message interleaved with the broadcast session portion, wherein the SDP provides information to a receiver for processing the broadcast session (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the

session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the SDP including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).

Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 5, Gagnon et al. discloses a wireless communication system supporting a broadcast service (See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting). Gagnon et al. also discloses receiving a session description protocol message corresponding to the broadcast session on the broadcast channel (See page 8 paragraph 36 of Gagnon et al. for reference to receiving SDP+ records about a broadcast session on the broadcast channel). Gagnon et al. further discloses that the SDP message provides information to a receiver for processing the broadcast session (See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol

version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the SDP message including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).

Gagnon et al. further discloses accessing a broadcast session and processing the broadcast session using the SDP message (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to accessing a broadcast session indicated by the SDP+ records and processing the broadcast session using information in the SDP+ records). Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 7, Gagnon et al. discloses a wireless apparatus (See page 7 paragraph 30 and Figure 1 of Gagnon et al. for reference to receiver station 106, which is a wireless apparatus). Gagnon et al. also discloses a means for receiving a broadcast service parameter message corresponding to a broadcast

session in a broadcast stream and a means for receiving an SDP corresponding to the broadcast session **(See page 8 paragraph 36 of Gagnon et al. for reference to receiver station 106 receiving SDP+ records, which are broadcast service parameter messages about a broadcast session on the broadcast channel).**

Gagnon et al. further discloses that the SDP message provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106).** Gagnon et al. also discloses the SDP message including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. further discloses a means for processing the broadcast session using the SDP **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast**

session using information in the SDP+ records). Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 12, Gagnon et al. discloses a method for indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).**

Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream **(See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream).** Gagnon et al. further discloses transmitting the broadcast stream on a broadcast transmission channel **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).**

Gagnon et al. also discloses that the information identifying the broadcast session protocol provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver**

station 106). Gagnon et al. further discloses the information including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the information identifying the broadcast session being transmitted in-band with the broadcast session.

With respect to claim 19, Gagnon et al. discloses a method indicating broadcast session protocol (See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol). Gagnon et al. also discloses receiving a broadcast stream (See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream). Gagnon et al. further discloses determining information in the broadcast stream identifying a broadcast session protocol in accordance with the received broadcast stream (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol and that are sent with the broadcast stream and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end

times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Interact), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the information including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. further discloses processing the broadcast stream in accordance with the determined information if the receiving station contains the broadcast session protocol (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station). Gagnon et al. does not specifically disclose the information in the broadcast stream being transmitted in-band with the broadcast session.

With respect to claim 23, Gagnon et al. discloses a method indicating broadcast session protocol (See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol). Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream (See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast

session to provide a broadcast stream). Gagnon et al. further discloses providing the broadcast stream for transmission **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).** Gagnon et al. also discloses that the information identifying the broadcast session protocol provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106).** Gagnon et al. further discloses the information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. does not specifically disclose the information identifying the broadcast session protocol being transmitted in-band with the broadcast session.

With respect to claim 34, Gagnon et al. discloses a method indicating broadcast session protocol (**See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol**). Gagnon et al. also discloses receiving a broadcast stream (**See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream**). Gagnon et al. further discloses determining an information element in the broadcast stream (**See page 8 paragraph 36 of Gagnon et al. for reference to determining SDP+ records, which are information elements that identify a broadcast session protocol and that are sent with the broadcast stream**). Gagnon et al. also discloses processing the broadcast stream in accordance with the determined information element (**See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. stream for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDP, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106**). Gagnon et al. further discloses the information including physical channel parameters (**See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and**

end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the information element being transmitted in-band with the broadcast session.

With respect to claim 39, Gagnon et al. discloses a method for indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses multiplexing an information for a receiver for processing broadcast session with a content of the broadcast session to provide a broadcast stream **(See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106).** Gagnon et al. further discloses the information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including**

information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. also discloses transmitting the broadcast stream on a broadcast transmission channel **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).** Gagnon et al. does not specifically disclose the information being transmitted in-band with the broadcast session.

With respect to claim 47, Gagnon et al. discloses a method indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses receiving a broadcast stream **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining information to a receiver in the broadcast stream for processing a broadcast session in accordance with the received broadcast stream **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol for broadcast session processing and that are sent with the broadcast stream and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is**

being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDP, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the broadcast overhead information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. further discloses processing the broadcast stream in accordance with the determined information **(See page 8 paragraph 36, page 16 paragraph 84, and page 17 paragraph 90 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station).** Gagnon et al. does not specifically disclose the information being transmitted in-band with the broadcast session.

With respect to claims 1, 3, 5, 7, 12, 19, 23, 34, 39, and 47, Wugofski, in the field of communications discloses transmitting broadcast overhead information in-band with a broadcast stream **(See column 2 lines 11-31, column 3 line 39 to column 4 line 3, and Figure 1A of Wugofski for reference to a program guide information, which is broadcast overhead information, being provided in-band in the vertical blanking interval of a channel with the in-band information including information**

used to process a broadcast session). Transmitting broadcast overhead information in-band with a broadcast stream has the advantage of creating more efficient bandwidth usage since no bandwidth channels need to be assigned to exclusively include broadcast control information.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Wugofski, to combine transmitting broadcast overhead information in-band with a broadcast stream, as disclosed by Wugofski, with the system and method of Gagnon et al., with the motivation being to create more efficient bandwidth usage since no bandwidth channels need to be assigned to exclusively include broadcast control information.

With respect to claim 2, Gagnon et al. discloses that the broadcast overhead information is a SDP message containing information for processing the session **(See page 8 paragraph 36 for reference to the overhead being an SDP+ record).** Gagnon et al. also discloses that the SDP message is interleaved with broadcast content **(See page 8 paragraph 36 for reference to the SDP+ records being broadcast on the broadcast channel with the broadcast data meaning they are interleaved with the broadcast content).**

With respect to claim 4, Gagnon et al. discloses that the signal is transmitted via a broadcast transmission channel **(See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to transmitting signals on a broadcast transmission channel).**

With respect to claim 6, Gagnon et al. discloses that the SDP message is interleaved with the broadcast content of the broadcast session **(See page 8 paragraph 36 for reference to the SDP+ records being broadcast on the broadcast channel with the broadcast data meaning they are interleaved with the broadcast content)**.

With respect to claim 9, Gagnon et al. discloses a memory storage storing the SDP corresponding to a plurality of broadcast session that is updated when the corresponding broadcast session is access **(See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions that is updated when a broadcast session is accessed)**.

With respect to claim 10, Gagnon et al. discloses that the memory is a cache memory **(See page 12 paragraph 61 of Gagnon et al. for reference to the SDP+ data store 540 being updated dynamically meaning SDP+ records are cached in the database)**.

With respect to claim 11, Gagnon et al. discloses that the memory is a look up table **(See page 12 paragraph 61, page 17 paragraph 89, and Figures 16A-16D of Gagnon et al. for reference to the memory being indexed by fields including an IP address of the corresponding broadcast session)**.

With respect to claims 13, 24, and 41, Gagnon et al. discloses multiplexing the broadcast session protocol with the broadcast session at the content server **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to multiplexing**

broadcast data and control data at the transmitter station 102, which is the content server).

With respect to claims 14, 25, and 42, Gagnon et al. discloses multiplexing the broadcast session protocol with the content of the broadcast session periodically **(See page 8 paragraph 36 for reference to multiplexing SDP+ records periodically).**

With respect to claims 15, 26, and 43, Gagnon et al. discloses periodically multiplexing with a frequency of multiplexing a short-term encryption key **(See page 12 paragraph 64 of Gagnon et al. for reference to multiplexing SDP+ records periodically at the same time as an encryption key).**

With respect to claims 16, 27, and 44, Gagnon et al. discloses multiplexing to provide a broadcast stream in accordance with a bandwidth condition **(See page 7 paragraph 31 of Gagnon et al. for reference to multiplexing the data together, which must conform to a maximum allowed bandwidth allocated to each broadcast channel).**

With respect to claims 18, 29, and 46, Gagnon et al. discloses multiplexing a broadcast session description identifier with a content of the broadcast session **(See page 15 paragraph 79 of Gagnon et al. for reference to multiplexing BARP information with the broadcast data with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session).**

With respect to claim 20, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media at the receiving station and processing the stream in accordance with the retrieved protocol **(See page 12 paragraph 61 of**

Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions and for reference to using data retrieved from the data store to process broadcast sessions).

With respect to claim 22, Gagnon et al. discloses determining a broadcast session description identifier of a broadcast session (See page 15 paragraph 79 of Gagnon et al. for reference to determining BARP information from broadcast sessions, with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session).

With respect to claim 30, Gagnon et al. discloses forming an information element comprising the broadcast session description identifier (See page 15 paragraph 79 of Gagnon et al. for reference to using BARP information from broadcast sessions, with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session). Gagnon et al. also discloses multiplexing the information element with a content of the broadcast session **(See page 15 paragraph 79 of Gagnon et al. for reference to multiplexing BARP information with the broadcast data).**

With respect to claim 31, Gagnon et al. discloses assigning each unit of the broadcast stream a sequence number (See page 12 paragraph 64 of Gagnon et al. for reference to each packet including a continuity counter that is contains a sequence number).

With respect to claim 32, Gagnon et al. discloses delivering each of the units through a media not guaranteeing in-sequence deliver and re-ordering the delivered

units in accordance with sequence number (**See page 12 paragraph 64 of Gagnon et al. for reference to using a continuity counter in each packet to re-order packets in the correct order at the receiver when packets are received out of sequence**).

With respect to claim 33, Gagnon et al. discloses establishing a generic routing encapsulation tunnel through a media not guaranteeing in-sequence delivery (**See page 12 paragraph 64 of Gagnon et al. for reference to using a continuity counter in each packet to re-order packets in the correct order at the receiver when packets are received out of sequence through the air/satellite transmission medium**).

With respect to claim 35, Gagnon et al. discloses determining a broadcast session protocol and processing the broadcast session in accordance with the broadcast session protocol (**See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records and for reference to the SDP+ records being used to process the broadcast session**).

With respect to claim 36, Gagnon et al. discloses determining a broadcast session description identifier (**See page 15 paragraph 79 of Gagnon et al. for reference to determining BARP information with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session**). Gagnon et al. also discloses processing the stream in accordance with a broadcast session protocol corresponding to the identifier (**See page 16 paragraphs 83-88 of Gagnon et al. for reference to processing a stream using an SDP+ record containing a protocol that is indexed by IP address of the broadcast channel**).

With respect to claim 40, Gagnon et al. discloses multiplexing a broadcast session protocol with broadcast content both before and after a protocol change (**See page 8 paragraph 36 of Gagnon et al. for reference to multiplexing SDP+ records periodically, meaning that the records are included both before and after any protocol change**).

With respect to claim 48, Gagnon et al. discloses processing the broadcast session in accordance with the determined information (**See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records containing broadcast protocol information and for reference to the SDP+ records being used to process the broadcast session**).

With respect to claim 49, Gagnon et al. discloses processing the broadcast session in accordance with the determined information if the receiving station contains the protocol (**See page 8 paragraph 36, page 12 paragraph 61, and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records containing broadcast protocol information and for reference to the SDP+ records being stored in a data store at the receiver station and used to process the broadcast session**).

With respect to claim 50, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media at the receiving station and processing the stream in accordance with the retrieved protocol (**See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing**

SDP+ record information for multiple broadcast sessions and for reference to using data retrieved from the data store to process broadcast sessions).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Wugofski and in further view of Birdwell et al. (U.S. Pat. 6032197).

With respect to claim 8, the combination of Gagnon et al. and Wugofski does not specifically disclose a means for receiving header compression information.

With respect to claim 8, Birdwell et al., in the field of communications, discloses receiving header compression information **(See column 6 line 59 to column 7 line 52 of Birdwell et al. for reference to a receiver receiving header compression information)**. Using header compression has the advantage of saving bandwidth in the transmission of data.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Birdwell et al., to combine using header compression, as suggested by Birdwell et al., with the system and method of Gagnon et al. and Wugofski, with the motivation being to save bandwidth in the transmission of data.

5. Claims 17, 28, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Wugofski and in further view of Rustad et al. (U.S. Pat. 6775303).

With respect to claims 17, 28, and 45, the combination of Gagnon et al. and Wugofski does not disclose multiplexing a broadcast session protocol with a content of the broadcast session when the broadcast content bandwidth is low.

With respect to claims 17, 28, and 45, Rustad et al., discloses embedding control signaling with content data when the bandwidth requirement of the content data is low (**See column 4 line 66 to column 5 line 7 of Rustad et al. for reference to this process**). Embedding control signaling with content data when the bandwidth requirement of the content data is low has the advantage of more efficiently using the complete bandwidth of a communication channel.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gagnon et al., to combine embedding control signaling with content data when the bandwidth requirement of the content data is low, as suggested by Rustad et al., with the system and method of Gagnon et al. and Wugofski, with the motivation being to more efficiently use the complete bandwidth of a communication channel.

6. Claims 21, 37-38, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Wugofski and in further view of Matsui et al. (U.S. Pat. 6580756).

With respect to claims 21, 37, and 51, the combination of Gagnon et al. and Wugofski does not disclose requesting SDP information when the SDP information is not available at the receiving station.

With respect to claims 21, 37, and 51, Matsui et al., in the field of communications, discloses requesting SDP information when the SDP information is not available at the receiving station **(See column 13 lines 36-45 of Matsui et al. for reference to a receiver requesting for SDP information to be sent from a server)**. Requesting SDP information when the SDP information is not available at the receiving station has the advantage of allowing a receiver station to actively request SDP information when the receiver station needs the SDP information to process a data stream.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Matsui et al., to combine requesting SDP information when the SDP information is not available at the receiving station, as suggested by Matsui et al., with the system and method of Gagnon et al. and Wugofski, with the motivation being to allow a receiver station to actively request SDP information when the receiver station needs the SDP information to process a data stream.

With respect to claim 38, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media **(See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions including broadcast protocol information)**.

7. Claims 1, 3, 5, 7, 12, 19, 23, 34, 39, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Auld, Jr. et al. (U.S. Patent 5,257,396).

With respect to claim 1, Gagnon et al. discloses a wireless communication system supporting a broadcast service **(See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting)**. Gagnon et al. also discloses transmitting a broadcast session on a broadcast transmission channel **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104)**. Gagnon et al. further discloses transmitting broadcast overhead information for the broadcast session with the broadcast session **(See page 8 paragraph 36 of Gagnon et al. for reference to including session description protocol plus (SDP+) records, which provide information about the broadcast sessions, in the broadcast sessions)**. Gagnon et al. also discloses that the broadcast overhead information provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the**

broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Interact), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. further discloses the broadcast overhead information including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the broadcast overhead information being transmitted in-band with the broadcast session.

With respect to claim 3, Gagnon et al. discloses a communication signal transmitted on a carrier wave (See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to a communication signal transmitted on a carrier wave from a transmission station 102 to a satellite/relay 104 and for reference to the signal being further transmitted from the satellite/relay 104 to a receiver station 106 on another carrier wave). Gagnon et al. also discloses transmitting a broadcast session portion (See page 7 paragraph 31 of Gagnon et al. for reference to the signal including a broadcast session). Gagnon et al. further discloses transmitting a session description protocol message interleaved with the broadcast session portion, wherein the SDP provides information to a receiver for processing the broadcast session (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for

reference to a broadcast signal including SDP+ records and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the SDP including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 5, Gagnon et al. discloses a wireless communication system supporting a broadcast service (See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting). Gagnon et al. also discloses receiving a session description protocol message corresponding to the broadcast session on the broadcast channel (See page 8 paragraph 36 of Gagnon et al. for reference to receiving SDP+ records about a

broadcast session on the broadcast channel). Gagnon et al. further discloses that the SDP message provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDP, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106)**. Gagnon et al. also discloses the SDP message including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session)**. Gagnon et al. further discloses accessing a broadcast session and processing the broadcast session using the SDP message **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to accessing a broadcast session indicated by the SDP+ records and processing the broadcast session using information in the SDP+ records)**. Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 7, Gagnon et al. discloses a wireless apparatus (See page 7 paragraph 30 and Figure 1 of Gagnon et al. for reference to receiver station 106, which is a wireless apparatus). Gagnon et al. also discloses a means for receiving a broadcast service parameter message corresponding to a broadcast session in a broadcast stream and a means for receiving an SDP corresponding to the broadcast session (See page 8 paragraph 36 of Gagnon et al. for reference to receiver station 106 receiving SDP+ records, which are broadcast service parameter messages about a broadcast session on the broadcast channel).

Gagnon et al. further discloses that the SDP message provides information to a receiver for processing the broadcast session (See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the SDP message including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel

parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. further discloses a means for processing the broadcast session using the SDP **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records).** Gagnon et al. does not specifically disclose the SDP information being transmitted in-band with the broadcast session.

With respect to claim 12, Gagnon et al. discloses a method for indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream **(See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream).** Gagnon et al. further discloses transmitting the broadcast stream on a broadcast transmission channel **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).** Gagnon et al. also discloses that the information identifying the broadcast session protocol provides information to a receiver for processing the broadcast session **(See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being**

broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDp, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. further discloses the information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. does not specifically disclose the information identifying the broadcast session being transmitted in-band with the broadcast session.

With respect to claim 19, Gagnon et al. discloses a method indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses receiving a broadcast stream **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining information in the broadcast stream identifying a broadcast session protocol in accordance with the received broadcast stream **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol and that are sent with the broadcast stream**

and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the information including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. further discloses processing the broadcast stream in accordance with the determined information if the receiving station contains the broadcast session protocol (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station). Gagnon et al. does not specifically disclose the information in the broadcast stream being transmitted in-band with the broadcast session.

With respect to claim 23, Gagnon et al. discloses a method indicating broadcast session protocol (See page 16 paragraph 84 of Gagnon et al. for

reference to using SDP+ records to indicate a broadcast session protocol).

Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream (**See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream**). Gagnon et al. further discloses providing the broadcast stream for transmission (**See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104**). Gagnon et al. also discloses that the information identifying the broadcast session protocol provides information to a receiver for processing the broadcast session (**See page 16 paragraph 84 of Gagnon et al. for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDP, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106**). Gagnon et al. further discloses the information including physical channel parameters (**See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel**

parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the information identifying the broadcast session protocol being transmitted in-band with the broadcast session.

With respect to claim 34, Gagnon et al. discloses a method indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses receiving a broadcast stream **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining an information element in the broadcast stream **(See page 8 paragraph 36 of Gagnon et al. for reference to determining SDP+ records, which are information elements that identify a broadcast session protocol and that are sent with the broadcast stream).** Gagnon et al. also discloses processing the broadcast stream in accordance with the determined information element **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. stream for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all**

types of information used to process the broadcast session by the receiver station 106). Gagnon et al. further discloses the information including physical channel parameters (See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session). Gagnon et al. does not specifically disclose the information element being transmitted in-band with the broadcast session.

With respect to claim 39, Gagnon et al. discloses a method for indicating broadcast session protocol (See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol). Gagnon et al. also discloses multiplexing an information for a receiver for processing broadcast session with a content of the broadcast session to provide a broadcast stream (See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFDP, Stream, Webcast, or Intericast), sorting information and filtering

information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. further discloses the information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. also discloses transmitting the broadcast stream on a broadcast transmission channel **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).** Gagnon et al. does not specifically disclose the information being transmitted in-band with the broadcast session.

With respect to claim 47, Gagnon et al. discloses a method indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses receiving a broadcast stream **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining information to a receiver in the broadcast stream for processing a broadcast session in accordance with the received broadcast stream **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol for broadcast session processing and**

that are sent with the broadcast stream and for reference to SDP+ records containing a combination of SDP fields and augmentations including a protocol version field, the owner/creator and session identifier, the name of the session, a brief description of the session, the multicast address on which the session is being broadcast, the start and end times of the broadcast, the repeat times of the broadcast, the port of the broadcast, the type of broadcast (e.g., BFD, Stream, Webcast, or Intericast), sorting information and filtering information, which are all types of information used to process the broadcast session by the receiver station 106). Gagnon et al. also discloses the broadcast overhead information including physical channel parameters **(See page 16 paragraphs 84-87 and page 17 paragraph 90 of Gagnon et al. for reference to the SDP+ records including information regarding start and end times of a broadcast, duration of a broadcast, and port of a broadcast, which are all physical channel parameters of the broadcast session used by a receiver to properly tune itself to receive the broadcast session).** Gagnon et al. further discloses processing the broadcast stream in accordance with the determined information **(See page 8 paragraph 36, page 16 paragraph 84, and page 17 paragraph 90 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station).** Gagnon et al. does not specifically disclose the information being transmitted in-band with the broadcast session.

With respect to claims 1, 3, 5, 7, 12, 19, 23, 34, 39, and 47, Auld, Jr. et al., in the field of communications discloses transmitting broadcast overhead information in-

band with a broadcast stream (**See column 1 line 61 to column 3 line 29 and the Figure of Auld, Jr. et al. for reference to receiving a CATV signal that includes both broadcast TV data as well as addition in-band data that is decoded and applied by a data switch 22 to tuning microprocessor 28 for controlling the operation of a decoder means 18**). Transmitting broadcast overhead information in-band with a broadcast stream has the advantage of creating more efficient bandwidth usage since no bandwidth channels need to be assigned to exclusively include broadcast control information.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Auld, Jr. et al., to combine transmitting broadcast overhead information in-band with a broadcast stream, as disclosed by Auld, Jr. et al., with the system and method of Gagnon et al., with the motivation being to create more efficient bandwidth usage.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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